

1 intake overestimating internal dose  
2 approach. That was the approach used in  
3 this case was the hypothetical intake that's  
4 defined in Technical Information Bulletin  
5 Number Two, and a part of that is to use the  
6 dose that a high non-metabolic organ or the  
7 colon -- you know, it shows fairly, it's  
8 described there. It points in fact lower  
9 large intestine is probably a better  
10 surrogate for the rectum. There is a target  
11 for that. It is nominally slightly higher  
12 than the colon. Given the nature that the  
13 intake was hypothetical in the first place,  
14 this kind of standard practice on that  
15 hypothetical intake to select the colon as  
16 the most, you know, the highest non-  
17 metabolic. That's what we're doing.

18 **DR. H. BEHLING:** This is Hans Behling. We  
19 agreed that the mistake resulted in nothing  
20 of any great significance and was just a  
21 technical issue with no significant impact  
22 on dose. Issue Five?

23 **MR. GRIFFON:** Can I -- Just one small thing  
24 on on your report, Hans, Page 10 just for  
25 clarification, Page 10, Table 1.2 in your

1 original report on this case.

2 **DR. H. BEHLING:** I don't have it available.

3 **MR. GRIFFON:** You don't have it? Just a  
4 small table here that shows that NIOSH  
5 intentionally overestimated a dose and it's  
6 fine, but just the way it's laid out I think  
7 is a little confusing. It says, "NIOSH dose  
8 in rem is 8.68," and then the other side,  
9 the other column says, "Dose from the lung  
10 scan is .827." And when you read the text  
11 it makes sense, but that to me it wasn't  
12 dose from the lung scan, it wasn't a CT --  
13 you know, it's dose derived (unintelligible)  
14 the lung scan and -- It's Table 1.2 -- but  
15 it's still the dose to the lower large  
16 intestine (unintelligible) derived from the  
17 lung scan (unintelligible). When I first  
18 saw that I didn't know what --

19 **DR. H. BEHLING:** Yeah, I'm not sure what  
20 that is. I'll have to look at it myself.

21 **MR. GRIFFON:** (Unintelligible) If you're  
22 like me sometimes you skim tables first,  
23 then you know anyway --

24 **MR. HINNEFELD:** I think the reviewer, I  
25 think this person had a bioassay or in vivo,

1 a chest in vivo record and the and the -- if  
2 I recall correctly the reviewer evaluated  
3 the result of that lung in vivo count with  
4 that, what's left of the technical, against  
5 what would have been there had the --

6 **MR. GRIFFON:** Yeah, the results I don't  
7 dispute. The (unintelligible) for the lung  
8 count would have been you know  
9 (unintelligible) by NIOSH, so it's an  
10 overestimate --

11 **MR. HINNEFELD:** Right, right.

12 **MR. GRIFFON:** But it was just a little  
13 confusing, that's all.

14 **MR. HINNEFELD:** Right, yeah, okay.  
15 Issue Number Five on Case 16 is that missed  
16 neutron dose, possibly amounting to about  
17 half a rem, was not included in the dose  
18 reconstruction. Our comment here is that an  
19 explanation of what happened, but I think  
20 it's probably a valid comment at Rocky  
21 Flats, it's probably a valid comment that  
22 you know if you've got neutron zeroes,  
23 thereby it might be something you would  
24 expect to do if you have neutron zeroes you  
25 would probably want to do a neutron missed

1 dose. There were, you know, as we've talked  
2 about earlier, there were a number of other  
3 overestimating approaches, like if a photon  
4 missed dose has too many zeroes and things  
5 like that, but despite that we try not to  
6 say well we overestimated once, so we're not  
7 going to worry about that. We try not to  
8 take that as a normal practice. So I think  
9 the comment here is probably an appropriate  
10 comment. We don't have really any -- SC&A's  
11 comment we feel like SC&A's issue is well-  
12 founded and we don't have any real  
13 particular conversation on it.

14 **DR. H. BEHLING:** And the only reason I  
15 brought it up, Wanda, if you go to Slide  
16 16.5 at the bottom, this is from ORAU  
17 (unintelligible) 0006, less than 50 percent  
18 probability is the attachment D that gives  
19 instructions, and it's just a statement here  
20 under discussion that says we need to  
21 perform cases that are well below 50  
22 percent. We need to maximize assumptions,  
23 and the last statement that says unlike  
24 approach for greater than 50 percent POC  
25 cases, this process does not allow

1 (unintelligible) dose reconstruction as all  
2 potential source of radiation must be  
3 valued. It's just a statement that says,  
4 you know, don't ignore something even if you  
5 know very well it's not going to  
6 significantly impact any POC calculation,  
7 but again the instructions say let's be  
8 exhaustive in assigning doses, be generous  
9 in claimant favorability, et cetera, and in  
10 this case missed neutron dose was not added,  
11 again, it's just for the optics, for the  
12 person who may look at this and say you know  
13 what, they took, they didn't give me credit  
14 for a missed neutron dose.

15 **MS. MUNN:** Yeah, right.

16 **DR. H. BEHLING:** That's all it is. That's  
17 all it is.

18 **MR. HINNEFELD:** And this person had neutron  
19 badge zeroes in their record as --

20 **DR. H. BEHLING:** Yeah, yeah, strictly an  
21 issue of optics.

22 Okay, I think that completes Case 17 --

23 **MR. HINNEFELD:** Sixteen.

24 **DR. H. BEHLING:** Oh, 16, sorry.

25 **PRESENTATION/DISCUSSION OF ISSUES FOR CASE #17**

1           **DR. H. BEHLING:** We're next on Claim Number  
2           17, and this involves a claim involving a  
3           worker at the Fernald facility. He was  
4           there from                               so approximately a  
5                               He worked in                               as  
6           a                               and  
7           The person has been diagnosed with two basal  
8           cell carcinoma, and on the basis of the  
9           assigned dose, he was given a probability of  
10          causation of 54 percent, so this is a  
11          partial dose reconstruction that focused  
12          purely on what is obviously of critical  
13          importance here, external skin dose at seven  
14          millirems, whatever, as an assessment for  
15          the probability of causation. No internal  
16          was even attempted because of the nature of  
17          the skin cancer, and I really have just a  
18          couple of comments which will fit into that,  
19          Stu, if you will introduce the issue.

20          **MR. HINNEFELD:** All right, Issue Number One  
21          is that in the dose reconstruction the  
22          employee had a relatively high level of  
23          shallow dose in his record as reported by  
24          the Department of Energy. And so the dose  
25          reconstruction, realizing that shallow --

1           the dose in the open window of the film  
2           badge would be partially due to beta  
3           particles in the uranium plant and partially  
4           due to photons, penetrate photons, decided  
5           that they would just do -- start the dose  
6           reconstruction since it's just partial by  
7           only considering the electron, the beta  
8           dose. So they made a subtraction of  
9           essentially the deep -- the recorded gamma  
10          dose. They subtracted that value from the  
11          shallow dose that was part of the DOE's  
12          records. And the reviewer took issue with  
13          that subtraction, feeling that that was not  
14          a correct adjustment to make.  
15          I think from our, from the dose  
16          reconstructor's standpoint that allowed him  
17          to not have to apportion any of the shallow  
18          dose that was recorded in the record to a  
19          photon dose, which a portion of it would  
20          have been. So it allowed him to essentially  
21          uncouple the photon from the beta particle  
22          dose and then only enter the beta particle  
23          dose in the dose reconstruction. The  
24          probability of causation was greater than 50  
25          percent, and he was done at that point, so

1           that was the reason for doing the  
2           subtraction.

3           **DR. H. BEHLING:** Okay, for my point of view  
4           I would ask you to go to Slide 17.1, and it  
5           gives you on the same note what this person  
6           did. As you will see in the second column,  
7           you have the DOE reported deep dose  
8           equivalent, which turns out to be for the  
9           full number of years, 4.5 rem, and then in  
10          the third column you have DOE reported  
11          shallow dose equivalent which turns out to  
12          be 28.2 for 8 rem. And what this person did  
13          -- I heard the point of efficiency, a  
14          partial, you know when you get to the point  
15          where it's greater than 50 you try to  
16          eliminate any unnecessary step in order to  
17          arrive at a conclusion that says we're going  
18          to compensate, there's no need to go  
19          further. And what he in essence did was  
20          introduce a step that he could have avoided,  
21          and simply say what is a valid dose that  
22          could contribute to a skin dose, and that  
23          includes both beta and low entry photons, so  
24          why don't we just stick with the -- DOE  
25          reported shallow dose -- and be done with it



1           because that would have been the simplest  
2           thing. Say let's do a 28 rem skin dose and  
3           on a basis of that assign a POC that says  
4           we're done. So what was described as an  
5           efficiency process is an extra step that  
6           didn't need to be done, so I take exception  
7           to the issue of efficiency as the  
8           motivation. I just hope that this dose  
9           reconstructor really didn't understand that  
10          skin cancer is the result of the dose that  
11          can come from both beta, low energy and high  
12          energy photons. And to me it raises the  
13          flag are we dealing with a person that  
14          doesn't understand the nature of cause and  
15          effect involving a dose that should have  
16          been recorded strictly as a skin dose and go  
17          from there instead of trying to pull out a  
18          deep dose. Maybe he was under the  
19          impression that deep dose didn't contribute  
20          anything to the skin dose. I don't know.

21       **MR. HINNEFELD:** I don't think that's the  
22       case. I think the case was he could have  
23       fewer lines on his IREP input sheet because  
24       he didn't have to enter and make any photon  
25       entries. End dose, end dose, IREP requires

1 a radiation type. And so a different line  
2 entry for every radiation type, so if you  
3 include the photon exposure to the skin in  
4 the dose reconstruction then you've doubled  
5 the number of IREP input lines because you  
6 need to put the photon entries in as well.

7 **DR. H. BEHLING:** I'll accept that as an  
8 explanation. I think we can be --

9 **MR. HINNEFELD:** It really doesn't matter.  
10 We all agree it was a greater than 50  
11 percent case.

12 **DR. H. BEHLING:** Okay, I'll accept that as  
13 an explanation of efficiency. It just  
14 struck me odd that a skin dose wouldn't be  
15 used since that --

16 **MR. HINNEFELD:** Right, right, absolutely you  
17 are correct. You are correct.

18 **MS. MUNN:** Do I understand --

19 **MR. HINNEFELD:** Okay, Issue Number Two where  
20 there was objection raised to the use of a  
21 constant value in IREP for the beta dose as  
22 opposed to the as opposed to a distribution,  
23 a normal distribution, typically it's used  
24 to measure (unintelligible) incorporate  
25 distribution. This was an underestimate of

1           the skin dose. Since we didn't include the  
2           photon contribution to the skin, we felt  
3           like the dose was no lower than the value  
4           that was selected. And since that was the  
5           case, the entire distribution would have  
6           been higher than the value we entered.  
7           Therefore, in this underestimating or  
8           partial dose reconstruction, we can enter  
9           the value of the constant and allow IREP to  
10          sample that same value every time.

11       **DR. BEHLING:** Again here we're talking about  
12       uncertainty, and I would have to say I would  
13       not want to have to do this uncertainty even  
14       if it was required.

15       **MS. MUNN:** This is Wanda. Stu, do I  
16       understand you correctly that when we do  
17       IREP that I will have to admit my  
18       incompetence with respect to IREP? I tried  
19       to run a couple of them and discovered that  
20       I was not yet ready for prime time. But did  
21       I understand you correctly to say that IREP  
22       requires a split out of the beta and gamma  
23       dose?

24       **MR. HINNEFELD:** Right, IREP calls for  
25       radiation types and for various radiation

1 types.

2 **MS. MUNN:** I see. So we don't really have  
3 the option of just plugging in the DOE?

4 **MR. HINNEFELD:** No, not in general.

5 **MS. MUNN:** Okay, very good.

6 **MR. HINNEFELD:** There are two electron  
7 energies. One is essentially only used for  
8 tritium low energy electron which is  
9 essentially only used for tritium exposures  
10 and a high energy. There are three proton  
11 energy ranges and there are five neutron  
12 energy ranges.

13 **MS. MUNN:** Okay, I remember there are  
14 several, but I didn't realize we didn't have  
15 the option of just plugging in the number.  
16 Thank you.

17 **MR. HINNEFELD:** I think I think if you get  
18 right down to it I think maybe for high  
19 energy electrons and photons there's a 30 to  
20 250 keV, I think their radiation  
21 effectiveness factor is the same in IREP for  
22 those two, they're identical. So if you  
23 actually lump those two together, you get  
24 the same answer as if you split them apart  
25 within the vagaries of Monte Carlo results.

1 MS. MUNN: Okay.

2 PRESENTATION/DISCUSSION OF ISSUES FOR CASE #18

3 DR. H. BEHLING: Okay, I guess we can go to  
4 Case 18, and that is a Fernald worker who  
5 was employed between so he  
6 was there for approximately ' years. He  
7 worked in plants and  
8 , not that I'm familiar with those. His  
9 job description is a was that of a  
10 . He had  
11 two cancers, the first one was a cancer of  
12 the lung and also multiple skin cancers.  
13 And again this was a partial dose  
14 reconstruction and the POC for this guy  
15 based on an assigned dose of 66.4 rem  
16 approximately was 57.4 percent, so again  
17 this guy goes over the threshold of  
18 compensability. There are a couple of  
19 issues so Stu, introduce Issue One.

20                   **MR. HINNEFELD:** Okay, Issue Number One  
21                   relates to the selection of a presumed  
22                   mixture of solubility types of 30 percent  
23                   Type S, or slow dissolution, and 70 percent  
24                   Type M, without documentation -- well, A),  
25                   since this is a partial dose reconstruction,

1           that won't produce the lowest dose. You  
2           know typically when we do a partial or a  
3           greater than 50 percent POC, we kind of want  
4           to, we kind of write into the dose  
5           reconstruction that -- Well, it seems to be  
6           at least this high, the dose seems to be at  
7           least this high, and so since it's at least  
8           this high and it can only be higher, here's  
9           the here's the result that's greater than 50  
10          percent, so we're done.

11          In this particular case, and in fact this  
12          was a common practice for Fernald lung  
13          cancer cases, there is -- there's several  
14          uncertainty in the various kinds of U308 and  
15          their solubility class. And their various  
16          numbers are cited different places,  
17          depending upon the treatment of the  
18          material. And there is various other, maybe  
19          not necessarily published, but  
20          conversational information, that's out  
21          there, so the actual -- It's unlikely that  
22          U308, that this would exist in most cases at  
23          a uranium plant is particularly pure in the  
24          solubility class, but doesn't necessarily  
25          fit one in particular. And so we felt like

1           -- saying it was Type M, which seems to be  
2           the more dominant discussed U30A\*, normally  
3           it would be Type A to them, we weren't so  
4           comfortable saying that we are confident in  
5           saying that all uranium is Type -- all U308\*  
6           is Type M, and therefore we will do dose  
7           reconstructions in accordance with that no  
8           matter what, and be able to defend that  
9           decision. We weren't terribly confident  
10          being able to defend that decision.  
11          And so we thought we ought to consider this  
12          some sort of mixture, and I gotta tell you,  
13          I don't know if we have a lot of empirical  
14          support for the particular mixture we chose.  
15          We felt that it was intuitively reasonable  
16          but other than that I don't know that I have  
17          a lot of support for it.  
18          I don't know how else you want to talk about  
19          this. I will say though that we are not  
20          required to make an underestimating dose  
21          reconstruction in order to have POC of 50  
22          percent. It's not required. It's not  
23          required to do an underestimate. I think if  
24          you do an estimate then you feel like -- If  
25          you don't have confidence that you can

1       refine it further on a particular avenue,  
2       then you've probably done a suitable amount  
3       of work and you can go with what you've done  
4       and that's what we've chosen to do on these  
5       exposures, on this exposure type of case, is  
6       to do this 30/70 split, so I don't know what  
7       your guys' take on this --

8       **DR. H. BEHLING:** This is sounding very nit-  
9       picking and I admit that this is again part  
10      of our first case where we had to show that  
11      we know what we're talking about and we can  
12      put it in again, but the only word that I  
13      would take out is in a statement that says -  
14      - in the dose reconstruction report,  
15      additional assumptions were necessary in  
16      order to determine all the parameters  
17      required to complete the lung dose  
18      reconstruction, the employee's work history,  
19      da-da-da, and it goes on -- technical  
20      reference reports solubility components in  
21      some airborne contamination samples at  
22      Fernald to be greater than 60 percent  
23      insoluble. NIOSH assumes a mix of 30  
24      percent Type S and 70 percent Type M in  
25      performing its dose reconstruction,



1           considering this ratio to be claimant  
2           favorable. (Unintelligible) claimant  
3           favorable in context of a of a greater than  
4           50 percent POC.

5           We're not supposed to be claimant favorable.  
6           If you would struck those two words out I  
7           would say we're trying to minimize the dose  
8           and claimant favorability is is a paradox to  
9           that dose reconstruction of a partial dose.  
10          You don't do claimant favorability. If you  
11          would have struck those two words out I  
12          would have said forget it, you know.

13       **MR. HINNEFELD:** Okay, well we'll be a little  
14       more reserved with our use of that term, I  
15       guess. It's -- I mean in this case it was  
16       just a partial dose. I think the logic of  
17       the comment -- and I understand the logic of  
18       the comment. The logic of the comment is  
19       since you didn't even reconstruct a prior  
20       dose, the other dose, why are you  
21       emphasizing this claimant favorable on the  
22       partial that you did? I understand the  
23       nature of the comment.

24       I think you would agree that had we done a  
25       dose reconstruction for this person, we had

1           -- It's all Type S (unintelligible) and it's  
2           a dose drop down and it was less than 50  
3           percent, you know, after we completed all  
4           the dose components it was less than 50  
5           percent. You would probably say we're not  
6           so sure you guys have evidence to support  
7           that. You would be telling us that if we  
8           had used a hundred percent S. So we chose a  
9           ratio, there is some air sampling data at  
10          Fernald, or some solubility studies that  
11          were done at Fernald, shows that there is in  
12          many cases a relatively high insoluble  
13          component -- they (unintelligible)  
14          solubility studies -- it was a small study.  
15          And so we felt like we chose reasonable  
16          ratios for these type cases. That's what we  
17          did.

18       **DR. H. BEHLING:** We will not be this nit-  
19       picking in the future.

20       **MR. HINNEFELD:** Write that down.

21       **MS. MUNN:** This was an exercise for the  
22       first time through.

23       **DR. H. BEHLING:** It is and that was the  
24       whole point, Wanda. We wanted to show that  
25       we can do nit-picking stuff and --

1           **MS. MUNN:** We can pick any nit you give us  
2           to pick.

3           **DR. H. BEHLING:** We wanted to show you, the  
4           Board members, that we -- You're dealing  
5           with a pretty competent group of people that  
6           went far beyond the call of duty.

7           **MS. MUNN:** Well, well done.  
8           Is this a good time for us to take a 10-  
9           minute break?

10          **DR. H. BEHLING:** Yes.

11          **MR. HINNEFELD:** I just want to know, was  
12          this 02? Was this issue the same as --

13          **DR. H. BEHLING:** Yes, the same as one, the  
14          same as one. I put that down, the issue two  
15          the same as one. So let's conclude with  
16          that particular case, and the next one will  
17          be 19, after the break.

18          **MR. HINNEFELD:** After the break. All right,  
19          how long are we going to break then?

20          **DR. H. BEHLING:** How about ten minutes? Is  
21          that going to be all right, Ray, Wanda?

22          **MS. MUNN:** Fine for me.

23          **MR. HINNEFELD:** Ray?

24          **COURT REPORTER:** Yes, that's fine, thanks.

25          **DR. H. BEHLING:** All right, ten minutes.

1 (Whereupon, a ten-minute break ensued.)

2 (During the break Mr. Griffon departed.)

3 **PRESENTATION/DISCUSSION OF ISSUES FOR CASE #19**

4 **DR. H. BEHLING:** We're back on. Case 19, at  
5 Oak Ridge National Laboratory. The person  
6 there was employed for a period between

7 so we're talking about a year  
8 period of employment at the X-10 site, and  
9 his job description was :

10 The person has a cancer of the colon. His  
11 assigned dose was 26.3 rem, and most of  
12 that, or it looks like about half of it, was  
13 assigned dose from an internal hypothetical  
14 model. The issues for this guy are -- How  
15 many issues do we have?

16 **MR. HINNEFELD:** We made comments about two.  
17 We made comments about two.

18 **DR. H. BEHLING:** Yeah, this is the  
19 individual that I believe was reviewed by  
20 someone who must have been talking to Case  
21 Number 16 because we're going to repeat some  
22 of the same issues and hopefully make that  
23 very, very brief because we discussed that  
24 in behalf of Case 16. Okay, Issue One.

25 **MR. HINNEFELD:** Okay, Issue Number One is

1           that the reiterative issue with the  
2           exclusion of tritium. There was no tritium  
3           dose in the dose reconstruction, and our  
4           response is the approach that has been that  
5           unless there is evidence of tritium  
6           exposure, we don't automatically assign  
7           tritium to everyone. A tritium worker  
8           generally will have tritium bioassay. I  
9           believe we got a full record with this  
10          person, including, perhaps some bioassay  
11          records, annual samples or infrequent  
12          samples, but there was no tritium bioassay.  
13          Job position didn't really seem one that  
14          would be lending itself to tritium exposure,  
15          and so based on that our decision was not to  
16          incorporate tritium exposure in the dose  
17          reconstruction. Person worked in Oak Ridge  
18          National Laboratory.

19       **DR. H. BEHLING:** Okay, we concur with that  
20       but also realize that the security inspector  
21       he was probably at multiple sites. I don't  
22       know exactly what a security inspector  
23       necessary does, but I assume he would have  
24       potentially been subjected to just about  
25       every location on site. The particular site

1           where he worked does in fact have tritium,  
2           and on the basis of no records, which we  
3           would agree there are no records for this  
4           individual that he was monitored, but again  
5           without having the details as we know in  
6           behalf of Savannah River Site, five  
7           microcuries or less per liter were at times  
8           not recorded and again in concert with  
9           claimant favorability that was obviously  
10          afforded to people at the Savannah River  
11          Site where we also assigned up to 355  
12          millirem a year for tritium doses, we felt  
13          perhaps a claimant favorability might be  
14          extended here. It's just a toss-up, there's  
15          no firm evidence, as Stuart has pointed out,  
16          to suggest he was exposed because of the  
17          absence of tritium data but because he was a  
18          security inspector, walked around and  
19          therefore has to probably been exposed to  
20          multiple locations and the practice of not  
21          necessary reporting urine data below five  
22          microcuries per liter raises the question of  
23          was he or wasn't he exposed in concert with  
24          the claimant favorability that was given to  
25          people at the Savannah River Site. In in in

1           this cases, Cases Six through Eleven, that  
2           we talked about yesterday, we felt there's a  
3           possibility that at least some consideration  
4           might have been given. It's a toss-up.

5           **MR. HINNEFELD:** Okay I -- Go ahead.

6           **MR. GIBSON:** This is Mike Gibson. Along  
7           with that I notice that there was no neutron  
8           dose considered, and given the fact that  
9           usually  
10          make plant tours, I wonder why there was no  
11          neutron dose considered.

12          **MR. HINNEFELD:** I would say it's probably  
13          the person didn't have a neutron badge, so  
14          there were no zeroes probably in the record.  
15          I'm guessing 'cause I don't have the record  
16          in front of us. Generally if there's a  
17          neutron badge worn, unless it's a facility  
18          that hangs a neutron badge on everybody, but  
19          if there's a neutron badge worn, generally  
20          we'll do a neutron dose consideration, and  
21          without a neutron badge being worn that's  
22          probably why the decision was made not to  
23          include it. It is a fact that security  
24          inspectors are liable to be anywhere on the  
25          facility. That is true. I think there are

1           other -- This inspector did get the  
2           hypothetical TIB-2 intake, there's a very,  
3           what we consider a very large overestimating  
4           internal dose assignment made, so I think  
5           it's -- I can check the neutron question  
6           more at National Lab. My recollection is  
7           that Oak Ridge National Lab was pretty  
8           comprehensive in its monitoring program from  
9           pretty early on. But you can't necessarily  
10          say that about all the Oak Ridge sites or  
11          all the DOE sites in general, but Oak Ridge  
12          National Lab seems to have been pretty  
13          comprehensive from pretty early on. And so  
14          we felt like it was an okay decision for  
15          this site.

16         Okay, the second issue was the same as  
17         before. We talked about the significant  
18         overestimate of medical exposure based on  
19         the selection of an organ, a maximizing  
20         organ dose, as opposed to an actual target  
21         organ dose. So we've kind of talked about  
22         that ad infinitum.

23         And those are the only two comments that we  
24         talk about, only two issues that we made  
25         comment on. So if there were other aspects



1 of the claim for discussion, I don't know  
2 what they would be.

3 **MR. GIBSON:** This is Mike Gibson. I have  
4 one other question. I believe this was a  
5 survivor claim, and there were several  
6 people listed as coworkers to follow up  
7 with, and it's not apparent that there was  
8 any follow-up done, either by phone or in  
9 person, with these coworkers who could maybe  
10 shed more light on this case. If that's the  
11 case why was that not done?

12 **MR. HINNEFELD:** Well, the coworker follow-up  
13 usually is done when there doesn't --  
14 there's evidence in the file or there's  
15 information that we feel we need to pursue  
16 further. It's not -- you know, we don't as  
17 a routine matter, call all the coworkers  
18 identified during the claimant interview.  
19 That's not part of the routine process. So  
20 while the claimant is asked during the  
21 interview are there people who work with you  
22 or worked with your, the interviewed  
23 employee, and may get some names of people  
24 like that, it's not a standard practice to  
25 call these people if the records seem

1 complete and the case seems like it's a  
2 pretty solid case with the information  
3 available. Now, you know, whether that's,  
4 you know that's the approach we're working  
5 on. Now certainly there can be some  
6 discussion of that in the Board, or among  
7 the Board, however you want to have that  
8 discussion. I think from our standpoint  
9 that's kind of the practice we've adopted,  
10 and the dose reconstruction was kind of  
11 consistent with that, what we've done.

12 **MS. MUNN:** This is Wanda. It was my  
13 understanding that that coworker data would  
14 be pursued primarily when there was lack of  
15 badge data or no real monitoring data and  
16 when there were circumstances where the job  
17 practice for that site was not well known.  
18 I don't think that's the case at X-10.

19 **MR. HINNEFELD:** Yeah, that's pretty much the  
20 way we're behaving. I think the issue here  
21 is on this claimant interview there probably  
22 are some coworkers asked -- or the claimant  
23 is asked do you know of any coworkers of the  
24 interviewed employee, and so some names are  
25 provided. But you know as you said with a

1           fairly complete, or a complete record or a  
2           feeling that there's sufficient information  
3           available with what we have in hand, it's  
4           not our standard practice to contact all  
5           those identified coworkers from all those  
6           interviews. Good, bad or indifferent,  
7           that's our standard practice.

8           **MS. K. BEHLING:** This is Kathy Behling. I  
9           have another question, and I think we did  
10          bring up this coworker issue yesterday  
11          because we hadn't seen any (unintelligible)  
12          where a coworker has been contacted. Would  
13          that be the dose reconstructor that would  
14          actually contact that coworker? Or how does  
15          that process work?

16          **MR. HINNEFELD:** Well, the dose reconstructor  
17          would not make the contact. The dose  
18          reconstructor can decide how -- for this  
19          case there are questions here that are not  
20          answered by the information available and  
21          maybe these coworkers who are identified can  
22          shed some light on it. They may make that  
23          decision. The contact would be made by the  
24          claimant interviewers --

25          **MS. K. BEHLING:** Okay --

1       **MR. HINNEFELD:** -- who conduct essentially  
2       all the interviews. Now a health physicist  
3       may sit in to facilitate that interview, to  
4       make sure the questions are appropriately  
5       phrased and appropriately you know and that  
6       the answers are appropriately understood,  
7       but it would typically not be the actual  
8       dose reconstructor working the case.

9       **MS. K. BEHLING:** Can you give me an idea at  
10      this point in time how many coworkers, or  
11      how many cases, you've actually contacted  
12      the coworkers?

13      **MR. HINNEFELD:** It's a few, it's not a lot.  
14      I don't know if it's as many as ten or not.  
15      I don't keep that statistic, so I don't  
16      know. I know there are a few that we have  
17      called the coworkers listed on the  
18      interviews.

19      **MR. GIBSON:** This is Mike Gibson, again. I  
20      guess I just want to follow up by saying  
21      that in the absence of knowing whether or  
22      not that the security inspectors do in fact  
23      wear TLDs or some sort of dosimeter, this  
24      may have been an appropriate case to contact  
25      some of the coworkers, given the fact that

1 the survivor may not have known the  
2 information.

3 **MR. HINNEFELD:** That's true. My  
4 recollection is we got an exposure record  
5 back for this person. I mean we had their  
6 film badge or TLD record I thought. I may  
7 be picking kind of from memory here, but I  
8 don't recall for sure.

9 **DR. H. BEHLING:** His photon dose was zero.

10 **MR. HINNEFELD:** It says zero reported.  
11 Okay, zero reported so apparently it was  
12 monitored. We did get the record because we  
13 have a missed dose component in there, so we  
14 did get his monitoring record from the  
15 Department of Energy and he did wear a film  
16 badge or a TLD.

17 **DR. H. BEHLING:** For this person, Wanda, we  
18 assigned a dose as you can see on the face  
19 page for Case 19. We assigned 21.363 rem  
20 for missed photon dose which covers a 20-  
21 year period. So he was clearly monitored  
22 throughout that whole period of time but  
23 never had a reportable exposure.

24 **MS. MUNN:** Yes, I was fairly certain that X-  
25 10 would be well-monitored.

1       **MR. HINNEFELD:** And then Issue Two, we did,  
2       was the one we already, okay. I think that  
3       concludes what we have for Case 19.

4       **PRESENTATION/DISCUSSION OF ISSUES FOR CASE #20**

5       **DR. H. BEHLING:** Yes. Okay, Case Number 20,  
6       which is our last one now. It's at Y-12,  
7       and this person was employed since       and  
8       as far as I know he may still be working  
9       there so he's been there for a period of --

10      **MS. MUNN:** Almost       years.

11      **DR. H. BEHLING:** -       -some-odd years. The  
12      cancer, however, was diagnosed in       , so  
13      we have a       -year period for assessing his  
14      exposure since we only assess exposure up to  
15      the time of cancer diagnosis, which was

16               The individual has a prostate cancer,  
17      and based on a dose of 15.8 rem, most of  
18      which was hypothetical internal exposure of  
19      the 15, 12 -- well in excess of 12 rem was  
20      hypothetical internal the POC of 10.26 was  
21      derived.

22      Okay, Issue Number One, Stuart.

23      **MR. HINNEFELD:** Issue Number One is that  
24      there's a description in the dose  
25      reconstruction of the surrogate organ that's